

Cleveland State University
College of Arts and Sciences
Bachelor of Science in Physics

First Year

| Fall Semester | | | | Spring Semester | | | |
|---|-------|--------|-------|------------------------------|-------|--------|------|
| Credits | Major | Gen Ed | | Credits | Major | Gen Ed | |
| ASC 101 Introduction to University Life | 1 | | INTRO | PHY 241 University Physics I | 5 | X | NS |
| ENG 101 English I | 3 | | W/C | MTH 182 Calculus II | 4 | X | M/QL |
| MTH 181 Calculus I | 4 | X | M/QL | Social Science Elective** | 3 | | SS |
| Social Science Elective** | 3 | | SS | ENG 102 English II | 3 | | W/C |
| African American Experience Elective | 3 | | DIV | | | | |
| <i>Semester Total</i> | | | | <i>Semester Total</i> | | | |
| 14 | | | | 15 | | | |

Second Year

| Fall Semester | | | | Spring Semester | | | |
|--|-------|--------|--------|--|-------|--------|-----|
| Credits | Major | Gen Ed | | Credits | Major | Gen Ed | |
| PHY 244 University Physics II | 5 | X | NS;WAC | PHY 325 Intro Theoretical Physics | 3 | X | |
| MTH 281 Multivariable Calculus | 4 | X | | STEM Elective [300/400 level] | 3 | X | |
| Arts & Humanities Elective** | 3 | | A&H | Writing Across the Curriculum Elective | 3 | | WAC |
| PHY 320 Intro Computational Physics [^] | 3 | X | | US Diversity Elective | 3 | | DIV |
| | | | | Arts and Humanities Elective** | 3 | | A&H |
| <i>Semester Total</i> | | | | <i>Semester Total</i> | | | |
| 15 | | | | 15 | | | |

Third Year

| Fall Semester | | | | Spring Semester | | | |
|--|-------|--------|-----|-------------------------------------|-------|--------|--|
| Credits | Major | Gen Ed | | Credits | Major | Gen Ed | |
| PHY 330 Modern Physics | 3 | X | | PHY 341 Mechanics and Vibrations II | 3 | X | |
| PHY 340 Mechanics and Vibrations I | 3 | X | | PHY 440 Quantum Physics I | 3 | X | |
| PHY 474 Thermal Physics | 3 | X | | PHY 475 Statistical Physics | 3 | X | |
| Writing Across the Curriculum Elective | 3 | | WAC | General Elective* | 3 | | |
| General Elective* | 3 | | | General Elective* | 3 | | |
| <i>Semester Total</i> | | | | <i>Semester Total</i> | | | |
| 15 | | | | 15 | | | |

Fourth Year

| Fall Semester | | | | Spring Semester | | | |
|---|-------|--------|--|------------------------------------|-------|--------|--|
| Credits | Major | Gen Ed | | Credits | Major | Gen Ed | |
| PHY 350 Electricity & Magnetism I | 3 | X | | PHY 351 Electricity & Magnetism II | 3 | X | |
| PHY 335, 461, or 455 ^{^^} | 3 | X | | PHY 335, 461, or 455 ^{^^} | 3 | X | |
| PHY 450 Optics & Electromagnetic Waves | 3 | X | | STEM Elective [300/400 level] | 3 | X | |
| General Elective* | 3 | | | General Elective* | 3 | | |
| General Elective* | 3 | | | General Elective* | 3 | | |
| Apply for Spring graduation by the middle of this term | | | | PHY 498 Capstone Senior Project | | | |
| <i>Semester Total</i> | | | | <i>Semester Total</i> | | | |
| 15 | | | | 16 | | | |
| <i>Degree Total (as listed in above sample): 120 (120 hours minimum required to earn degree)</i> | | | | | | | |

Assumptions: college-level readiness in MTH & ENG; no Foreign Language Deficiency

College/ Program Notes:

The plan above is a suggested guide to ensure that all General Education, College, University, and Major requirements are met within 4 years of study. Students may deviate from the suggested placement of Gen Ed courses, although the M/QL and W/C requirements should be completed during the first year of study.

*General Electives ensure that a student accumulates the minimum credit hour totals needed for graduation. Students must have a **minimum of 120 total credit hours**, of which a **minimum of 42 credit hours** must be upper division (300 or 400-level courses). Depending upon elective choices made, students may not need as many electives as indicated above, or may need additional electives.

[^]CIS 260, ESC 151, ESC 152, or MTH 311 may be used as substitutes.

^{^^}Choose two courses from the following: PHY 335, 461, or 455. Note: PHY 335 offered in spring odd sems; PHY 455 offered in spring even sems; PHY 461 offered fall odd sems

University Notes:

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| Gen Ed Key: INTRO = Introduction to University Life (one course) W/C = Writing/Composition (two courses; C or better required) M/QL = Mathematics/Quantitative Literacy (two courses) NS = Natural Sciences (two courses, one of which must have a lab) | SS = Social Sciences (two courses from different departments**) A&H = Arts & Humanities (two courses from different departments**) DIV = Social Diversity (two courses; one US Diversity and one African American Experience) WAC/SPAC = Writing/Speaking Across the Curriculum (three courses, one in the major; C or better required) CAP = Capstone ** of the four total SS and A&H courses, one must be focused on Africa, Latin America, Asia or the Middle East (ALAAME) |
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